

**REMARKS**

Claims 1-10 are pending in this application, of which claims 1, 3, 5 and 9 have been amended. No new claims have been added.

The Examiner has required a new, more descriptive title.

Accordingly, the title has been so amended.

The Examiner has indicated that FIG. 21 should be labeled "Prior Art". FIG. 21 has been so corrected.

The Examiner has objected to the disclosure "because throughout the disclosure the space between words is either almost nothing or simply missing."

Accordingly, the specification has been so corrected.

Claims 1-10 stand rejected under 35 USC §112, second paragraph, as indefinite.

Accordingly, claims 1, 3, 5 and 9 have been amended to correct the noted instances of indefiniteness. Applicants submit that claim 2 need not be amended because claim 1 has been amended to provide proper antecedent basis for "the voltage drop".

Thus, the 35 U.S.C. §112, second paragraph rejection should be withdrawn.

Claims 1-7 and 10 stand rejected under 35 USC §102(b) as anticipated by U.S. Patent 5,550,702 to Schmidt et al. (hereinafter "**Schmidt et al.**").

Applicants respectfully traverse this rejection.

**Schmidt et al.** discloses a technique for which integrated circuit duty-cycle control or pulse width current limiting adaptively responds to the load, allowing a brief inrush current event upon startup of the load, while restricting long-term power dissipation to a lower value. Upon sensing an

overcurrent condition, a duty cycle control circuit causes the output to be placed into a high duty-cycle mode of operation to provide sufficient power to the load. A thermal sense circuit provides additional control because if the overcurrent condition continues and the junction temperature rises to the thermal sense trip point, the duty cycle control circuit places the output in a lower duty-cycle mode.

The Examiner has specifically urged that  $R_1$ , which is connected between the series-pass element  $M_1$  (the switching element corresponding to the power MOSFET claimed in the present invention) and the load, corresponds to the “thermoelectric element” incorporated in the power MOSFET.

Applicants respectfully disagree.  $R_1$  in Schmidt et al. is connected between  $M_1$  and the load and, if  $M_1$  is represented by a MOSFET, presumably between the source electrode and the load. In contrast, page 11, lines 12-14 of the specification of the instant application discloses that the diode (thermoelectric element) is “electrically insulated from the gate and source electrode” of the power MOSFET.

Accordingly, claim 1 has been amended to clarify this distinction, and the 35 U.S.C. §102(b) rejection should be withdrawn.

Claim 8 stands rejected under 35 USC §103(a) as unpatentable over Schmidt et al.

Applicants respectfully traverse this rejection.

The Examiner has admitted that Schmidt et al. fails to disclose a diode as a thermoelectric element, but has taken Office Notice that a diode may be used as such.

Diodes and resistors have different volt-amp characteristics depending on the polarity and magnitude of the voltage applied across them, so they are not direct equivalents. Furthermore, claim 8 depends from claim 1 and, as noted above, Schmidt et al. fails to disclose the limitations contained in the amendments to claim 1.

Thus, the 35 U.S.C. §103(a) rejection should be withdrawn.

Claim 9 stands rejected under 35 USC §103(a) as unpatentable over Schmidt et al. in combination with U.S. Patent 6,356,423 to Hastings et al. (hereinafter "Hastings et al.").

Applicants respectfully traverse this rejection.

Hastings et al. has been applied to teach a plurality of load drive-control circuits to control a plurality of loads but, like Schmidt et al., fails to teach, mention or suggest the limitations in the amendments to claim 1, from which claim 9 depends.

Thus, the 35 U.S.C. §103(a) rejection should be withdrawn.

In view of the aforementioned amendments and accompanying remarks, claims 1, 3, 5 and 9, as amended, are in condition for allowance, which action, at an early date, is requested.

If, for any reason, it is felt that this application is not now in condition for allowance, the Examiner is requested to contact Applicants undersigned attorney at the telephone number indicated below to arrange for an interview to expedite the disposition of this case.

In the event that this paper is not timely filed, Applicants respectfully petition for an appropriate extension of time. Please charge any fees for such an extension of time and any other fees which may be due with respect to this paper, to Deposit Account No. 01-2340.

Respectfully submitted,

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PATENT TRADEMARK OFFICE

Enclosures:   Substitute Abstract of the Disclosure  
                  Replacement Sheet Fig. 21

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